Commonwealth of Kentucky
Natural Resources and Environmental Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382

AIR QUALITY PERMIT

Issued under 401 KAR 52:020

Permittee Name:	Gallatin Steel Company
Mailing Address:	4831 US Highway 42 West Ghent, KY 41045
Source Name:	Gallatin Steel Company
Mailing Address:	4831 US Highway 42 West Ghent, KY 41045
Source Location:	US Highway 42 West, Warsaw, Kentucky
Permit Number:	V-03-031 (Revision 1)
Log Number:	56611
Review Type:	Title V/PSD
KYEIS ID #:	21-077-00018
SIC Code:	3312
Regional Office:	Florence Regional Office 8020 Veteran's Memorial Drive Florence, KY 41042 (859) 525-4923
County:	Gallatin
Issuance Date:	October 29, 2003
Revision Date:	September XX, 2004
Expiration Date:	October 29, 2008

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John S. Lyons, Director
Division for Air Quality

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Rev #	Permit type	Log #	Complete Date	Issuance Date	Summary of Action
----	Initial Issuance	51083		10/29/03	
1	Significant revision	56611			New equipment and alternate operating scenarios

SECTION A – PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first having submitted a complete application and received a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:020, Title V Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by this Cabinet or any other federal, state, or local agency.

Gallatin Steel Company, AFS # 21-077-00018; the adjacent slag processing plant, AFS # 21-077-00020; and the industrial gas plant, AFS # 21-077-00023, are considered by the Kentucky Division for Air Quality and the US EPA Region IV to be one source as defined in 401 KAR 51:017, Prevention of significant deterioration of air quality (PSD) and subject to 401 KAR 52:020 Title V Permits. Each is responsible and liable for their own violations unless there is a joint cause for the violations.

The following documents are attached and incorporated herein as APPENDICES I – III:

APPENDIX I – MELT SHOP PARTICULATE EMISSIONS: PRELIMINARY COMPLIANCE DEMONSTRATION

APPENDIX II – MELT SHOP MASS BALANCE: CONTINUOUS COMPLIANCE DEMONSTRATION

APPENDIX III – OCTOBER 4, 2000 CONSENT DECREE

SECTION A – PERMIT AUTHORIZATION

Definitions: The following definitions apply to all abbreviations and variables used in this permit:

PT	– total particulate matter
PM10	– particulate matter equal to or smaller than 10 micrometers
CO	– carbon monoxide
NO_x	– nitrogen oxides
SO_2	– sulfur dioxide
Pb	– lead
VOC	– volatile organic compounds

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

GROUP REQUIREMENTS:

0E1 & 0E2 Existing Melt Shop

Description: Existing melt shop, consisting of the following:

Twin-Shell DC EAF & continuous caster
Ladle and tundish bricking, deskulling, and brick tear-out
Shell bricking and brick tear-out
Two LMF's
One tundish dryer, 1.5 MMBtu/hr
One ladle dryer, 8 MMBtu/hr
Three ladle pre-heaters, 10 MMBtu/hr, each
Two tundish pre-heaters, 10 MMBtu/hr, each
Two tundish casting nozzle pre-heaters, 5 MMBtu/hr, each
Two stirring stations
Dump pit for handling used refractory materials
Scrap cutting from slag pot

Annual hours of operation: 8760 hours/year
Control Device: positive pressure fabric filter baghouse
Construction Commenced: April 1993

APPLICABLE REGULATIONS:

401 KAR 60:005 40 CFR Part 60, Subpart AAa Standards of performance for steel plants: electric arc furnaces and argon-oxygen decarburization vessels.
401 KAR 51:017 Prevention of significant deterioration of air quality.
401 KAR 59:010 New process operations.
401 KAR 63:010 Fugitive emissions.
401 KAR 63:020 Potentially hazardous matter or toxic substances.

1. Operating Limitations:

a. The permittee is authorized to operate the source under any of the scenarios described in SECTION H below provided that all conditions of that scenario have been met.

b. Scrap substitutes shall be limited to the following general categories: pig iron, direct reduced iron, iron carbide and briquetted iron (limit on PTE). The following materials generated on-site may be added to the EAF: dropout chamber contents, spark arrestor dust, roll grinding swarf, baghouse bags, personal protective equipment from baghouse and ductwork maintenance and baghouse dust.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

c. The permittee shall use high-grade, low residual, pre-processed and inspected scrap (BACT).

d. The permittee shall not add into the EAF any charged carbon or any other carbon substitutes with a sulfur content greater than 0.65 percent by weight as received (BACT).

e. The permittee shall properly maintain and operate the sidewall burners (located within the EAF shell) in accordance with manufacturer's guidelines. The sidewall burners may be removed and/or replaced if the permittee demonstrates to the Division's satisfaction that compliance with the BACT limitations listed herein can be achieved (BACT).

f. The permittee is only authorized to operate the source under the operating scenarios that were in use when compliance was demonstrated.

g. The permittee shall use necessary and reasonable precautions to control particulate emissions from the handling of the used refractory materials.

h. The permittee may add drugs, firearms, and other materials confiscated by law enforcement agencies to the EAF charge.

i. The permittee shall operate control equipment and/or implement work practice standards as reasonable precautions to prevent particulate matter from becoming airborne and exiting any opening from the Melt Shop into the open air. Reasonable precautions may include, but are not limited to:
    i. Downdraft and/or plastic strip air curtains at Melt Shop openings with fugitive particulate emissions; and
    ii. Keeping doors closed except for pass-through traffic.

j. The permittee shall open the following doors only for pass-through traffic: M30, M32, M37 and M35.

k. The permittee shall only open the door labeled M28 when ladle tear-out operations are underway in that area.

l. The door labeled A SCRAP shall be maintained at all times with a plastic strip air curtain covering the top 15 feet of the opening.

m. After removal from the furnaces, all slag shall be deposited into slag carrying pots and transported to the designated slag processing area

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n. All devices installed to meet alternate monitoring requirements described in 4.d. below shall be subject to the following operating conditions:
   i. The monitoring device(s) shall be installed in any appropriate location such that reproducible monitoring data will result.
   ii. Furnace pressure monitoring devices shall have an accuracy of ±5 mm of water gauge over its normal operating range and shall be calibrated according to the manufacturer's instructions.
   iii. The flow rate monitoring device(s) shall have an accuracy of ±10 percent over the normal operating range and shall be calibrated according to the manufacturer's instructions.
   iv. Operating parameters shall be determined during the most recent compliance demonstration and/or any other time required by the Division.
   v. Operating parameters shall be specified for all periods in which a hood is operated for the purpose of capturing emissions from the EAF and shall be maintained at the appropriate level for each applicable period.

The permittee may petition the Division to reestablishment operating parameters whenever the EAF operating conditions upon which the parameters were previously established are no longer applicable. Operation at other than baseline values may be subject to the requirements of §60.276a(c).

2. Emission Limitations:

a. *Opacity Standard:* The permittee shall comply with the requirements of 40 CFR 60.272 (a), Standard for Particulate Matter, unless more stringent requirements are listed herein. As provided in 40 CFR 60.272 (a), the visible emissions as determined by US EPA's Method 9 shall meet the following limits:
   i. Less than three (3) percent opacity exiting the Melt Shop's baghouse when the EAF is in operation;
   ii. Less than ten (10) percent opacity from the dust handling system;
   iii. Less than six (6) percent opacity from any Melt Shop opening when the EAF is in operation;
   iv. Less than twenty (20) percent opacity from any building opening or baghouse when the EAF is not in operation.

   i. Compliance demonstrations: The permittee shall demonstrate compliance with the opacity standards listed above as follows:Baghouse and Dust Handling System – the permittee shall demonstrate compliance with baghouse and dust handling system opacity standards by monitoring as described in 4.b. below.
   ii. Melt Shop Openings – the permittee shall demonstrate compliance with Melt Shop opening opacity standards by monitoring as described in either 4.c. or 4.d. below..

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

b. *Mass Emission Standard:* hourly particulate emission rates shall not exceed the following limits:
   i. The total baghouse particulate emission rate shall not exceed 16.05 lbs/hr (BACT).
   ii. The particulate grain loading as measured at the baghouse exit by Reference Method 5D, 40 CFR 60, Appendix A, shall not exceed 0.0018 grain/dscf (BACT).
   iii. Total emissions of particulate matter from both caster monovents shall not exceed 34.96 lb PM10/hr.
   iv. Total emissions of particulate matter from all 10 Melt Shop doors shall not exceed 3.88 lb PM10/hr.

   Compliance demonstrations: The permittee shall demonstrate compliance with the emission standards listed above as follows:
   i. Baghouse Emissions – the permittee shall demonstrate compliance with baghouse particulate emission limits by Reference Method 5D, 40 CFR 60, Appendix A stack test. For required testing frequency, see number 3. Testing Requirements below.
   ii. Monovent and Door Emissions: preliminary demonstration – the permittee shall demonstrate initial compliance with monovent and door particulate emission limits by, at minimum, performance testing on all Melt Shop doors and monovents as outlined in APPENDIX I – MELT SHOP PARTICULATE EMISSIONS: PRELIMINARY COMPLIANCE DEMONSTRATION (the permittee shall remain free to implement testing procedures above and beyond those described in APPENDIX I).
   iii. Monovent and Door Emissions: continuous demonstration – the permittee shall demonstrate continuous compliance with monovent and door particulate emission limits by performing the Melt Shop mass balance provided in APPENDIX II – MELT SHOP MASS BALANCE: CONTINUOUS COMPLIANCE DEMONSTRATION. The entire Melt Shop shall be characterized as outlined in APPENDIX II. All calculated values shall be reported. For required reporting frequency, see number 6. Specific Reporting Requirements below.

c. *Carbon Monoxide Emission Standard:* carbon monoxide emissions shall not exceed the following limits:
   i. Total carbon monoxide emissions shall not exceed 400 lbs CO/hr (BACT).
   ii. Process rate based carbon monoxide emissions shall not exceed 2 lbs CO/ton of liquid steel (BACT).

   Compliance demonstrations: The permittee shall demonstrate compliance with the emission standards listed above as follows:

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i. Total CO Emissions – the permittee shall demonstrate continuous compliance with total carbon monoxide emission limits by applying the following:

$$E_{CO} = 4.364 \times 10^{-6} \cdot C_{CO} \cdot V$$

$$E_{CO} \leq 400 \; lbs \; CO / hr$$

Where E_{CO} is the carbon monoxide emissions in lbs CO/hour, C_{CO} is the hourly average CEM concentration over 24 hours in ppm and V is the exhaust rate at standard conditions, determined using the testing methodology delineated under number 3. Testing Requirements below, in scfm.

ii. Process Rate Based CO Emissions: The permittee shall also demonstrate compliance with carbon monoxide emissions per ton of liquid steel produced by applying the following:

$$x_{CO} = \frac{E_{CO}}{P}$$

$$x_{CO} \leq 2 \; lbs \; CO / ton \; liquid \; steel \; produced$$

Where x_{CO} is the carbon monoxide emissions in lbs CO/ton liquid steel produced, E_{CO} is the carbon monoxide emissions in lbs CO/hour and P is the average ton liquid steel poured during the 24 hour production day.

Monitoring requirements: If the CEM data (set of 24 hour block averages) recorded in a calendar quarter show excursions from the hourly emission limit that occur in the aggregate for more than 5% of the total number of 24 hour sets generated during the quarter, the permittee shall contact the Division within thirty (30) days of aggregation of said excursions to schedule a performance test to demonstrate compliance with the carbon monoxide emission rate. The permittee shall conduct the performance test within ninety (90) days from the date it is required to contact the Division. The Division may waive this testing requirement upon a demonstration that the cause of the excursions has been corrected. If the permittee demonstrates to the Division, and the Division concurs, that CO emissions for two consecutive years are shown to be less than or equal to 75% of the standards (both the lb/hr and lb/ton number) specified herein based upon CEM data, i.e., no daily average CO emission rate computed from the CEM data exceeding 300 lbs/hr or 1.5 lb/ton, then the permittee may discontinue collection of the hourly CEM concentration data. However, if later annual performance testing shows that CO emissions are greater than 75% of the hourly standard, then the hourly CEM data collection must be resumed within 6 months. If the permittee chooses to discontinue collection of the hourly CEM concentration data, then the compliance demonstrations above will be performed with the highest average daily concentration to have occurred in the preceding two years of

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continuous monitoring or the results of the annual compliance stack test, whichever is higher.

d. *Nitrogen Oxide Emission Standard*: nitrogen oxide emissions, expressed as NO_2, shall not exceed the following limits:
   i. Total nitrogen oxide emissions shall not exceed 102 lbs NO_2/hr (BACT).
   ii. Process rate based nitrogen oxide emissions shall not exceed 0.51 lbs NO_2/ton of liquid steel (BACT).

Compliance demonstrations: The permittee shall demonstrate compliance with the emission standards listed above as follows:

i. Total Nitrogen Oxide Emissions – the permittee shall demonstrate continuous compliance with total nitrogen oxide emission limits by applying the following:

$$E_{NO_2} = 7.17 \times 10^{-6} \cdot C_{NO_2} \cdot V$$

$$E_{NO_2} \leq 102 \; lbs \; NO_2 / hr$$

Where E_{NO2} is the nitrogen oxide emissions in lbs NO_2/hour, C_{NO2} is the hourly average CEM concentration over 24 hours in ppm and V is the exhaust rate at standard conditions, determined using the testing methodology delineated under number 3. Testing Requirements below, in scfm.

ii. Process Rate Based Nitrogen Oxide Emissions: The permittee shall also demonstrate compliance with nitrogen oxide emissions per ton of liquid steel produced by applying the following:

$$x_{NO2} = \frac{E_{NO_2}}{P}$$

$$x_{NO2} \leq 0.51 \; lbs \; NO_2 / ton \; liquid \; steel \; produced$$

Where x_{NO2} is the nitrogen oxide emissions in lbs NO_2/ton liquid steel produced, E_{NO2} is the nitrogen oxide emissions in lbs NO_2/hour and P is the average ton liquid steel poured during the 24 hour production day.

Monitoring requirements: If the CEM data (set of 24 hour block averages) recorded in a calendar quarter show excursions from the hourly emission limit that occur in the aggregate for more than 5% of the total number of 24 hour sets generated during the quarter, the permittee shall contact the Division within thirty (30) days of aggregation of said excursions to schedule a performance test to demonstrate compliance with the nitrogen oxides emission rate. The permittee shall conduct the performance test within ninety (90) days from the date it is required to contact the Division. The Division may waive this testing requirement

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upon a demonstration that the cause of the excursions has been corrected. If the permittee demonstrates to the Division, and the Division concurs, that NO_x emissions for two consecutive years are shown to be less than or equal to 75% of the standards (both lb/hr and lb/ton) specified herein based upon CEM data, i.e., no daily average NO_x emission rate computed from CEM data exceeding 76.5 lbs/hr or 0.383 lb/ton, then the permittee may discontinue collection of the hourly CEM concentration data. However, if later annual performance testing shows that NO_x emissions are greater than 75% of the hourly standard, then the hourly CEM data collection must be resumed within 6 months. If the permittee chooses to discontinue collection of the hourly CEM concentration data, then the compliance demonstrations above will be performed with the highest average daily concentration to have occurred in the preceding two years of continuous monitoring or the results of the annual compliance stack test, whichever is higher.

e. *Sulfur Dioxide Emission Standard*: sulfur dioxide emission rates shall not exceed the following limits:
   i. For products with sulfur chemistries ≥ 0.012 wt % sulfur, 40 lbs SO_2/hr; for all other products 98 lbs SO_2/hr (BACT).
   ii. For products with sulfur chemistries ≥ 0.012 wt % sulfur, 0.2 lbs SO_2/ton of liquid steel, for all other products 0.49 SO_2/ton of liquid steel (BACT).

Compliance demonstrations: The permittee shall demonstrate compliance with the emission standards listed above as follows:

i. Total Sulfur Dioxide Emissions: The permittee shall demonstrate continuous compliance with total sulfur dioxide emission limits by applying the following:

$$E_{SO_2} = 9.974 \times 10^{-6} \cdot C_{SO_2} \cdot V$$

$$E_{SO_2} \le 40\ lbs\ SO_2 / hr \quad if\ \ p \ge 0.012\ wt\%$$

$$E_{SO_2} \le 98\ lbs\ SO_2 / hr \quad if\ \ p < 0.012\ wt\%$$

Where E_{SO2} is the sulfur dioxide emissions in lbs SO_2/hour, C_{SO2} is the hourly average CEM concentration over 24 hours in ppm and V is the exhaust rate at standard conditions, determined using the testing methodology delineated under number 3. Testing Requirements below, in scfm and p is the product's sulfur chemistry weight percent.

ii. Process Rate Based Sulfur Dioxide Emissions: The permittee shall also demonstrate compliance with sulfur dioxide emissions per ton of liquid steel produced by applying the following:

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$$x_{SO2} = \frac{E_{SO_2}}{P}$$

$$x_{SO2} \le 0.2\ lbs\ SO_2 / ton\ liquid\ steel\ produced \quad if\ \ p \ge 0.012\ wt\%$$

$$x_{SO2} \le 0.49\ lbs\ SO_2 / ton\ liquid\ steel\ produced \quad if\ \ p < 0.012\ wt\%$$

Where x_{SO2} is the sulfur dioxide emissions in lbs SO_2/ton liquid steel produced, E_{SO2} is the sulfur dioxide emissions in lbs SO_2/hour and P is the average ton liquid steel poured during the 24 hour production day and p is the product's sulfur chemistry weight percent.

Monitoring requirements: If the CEM data (set of 24 hour block averages) recorded in a calendar quarter show excursions from the hourly emission limit that occur in the aggregate for more than 5% of the total number of 24 hour sets generated during the quarter, the permittee shall contact the Division within thirty (30) days of aggregation of said excursions to schedule a performance test to demonstrate compliance with the sulfur dioxide emission rate. The permittee shall conduct the performance test within ninety (90) days from the date it is required to contact the Division. The Division may waive this testing requirement upon a demonstration that the cause of the excursions has been corrected. If the permittee demonstrates to the Division, and the Division concurs, that SO_2 emissions for two consecutive years are shown to be less than or equal to 75% of the standards (both the lb/hr and lb/ton number) specified herein based upon CEM data, i.e., no daily average SO_2 emission rate computed from the CEM data exceeding 30 lbs/hr or 0.15 lb/ton and 73.5 lb/hr or 0.345 lb/ton , then the permittee may discontinue collection of the hourly CEM concentration data. However, if later annual performance testing shows that SO_2 emissions are greater than 75% of the hourly standard, then the hourly CEM data collection must be resumed within 6 months. If the permittee chooses to discontinue collection of the hourly CEM concentration data, then the compliance demonstrations above will be performed with the highest average daily concentration to have occurred in the preceding two years of continuous monitoring or the results of the annual compliance stack test, whichever is higher.

f. *Lead Emission Standard*: lead emission rates shall not exceed the following limits:
   i. Total lead emissions shall not exceed 0.162 lb Pb/hr (BACT).
   ii. Lead emissions shall not exceed 0.00081 lb Pb/ton of liquid steel (BACT).

g. *VOC Emission Standard*: volatile organic compound emissions shall not exceed the following limits:
   i. Total VOC emissions shall not exceed 26 lbs VOC/hr (BACT).

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ii. VOC emissions shall not exceed 0.13 lb VOC/ton of liquid steel (BACT).

h. *Fugitive Emission Standard*:
   i. 401 KAR 63:010 Section (3), the permittee shall not cause or permit the discharge of visible fugitive dust emissions beyond the lot line of the property on which the emissions originate; and
   ii. 401 KAR 63:010 Section (3), reasonable precautions shall be taken to prevent particulate matter from becoming airborne.

3. Testing Requirements:

a. The permittee shall comply with the requirements of 40 CFR 60.275 (a), Test methods and procedures, unless more stringent requirements are listed herein.

b. The permittee shall conduct annual baghouse performance tests within 90 calendar days of the anniversary date of the initial performance test (Febrary 22, 1998) and every year thereafter for NO_x, VOC, PM, CO, Pb and SO_2. If two consecutive annual tests result in specified emissions being less than or equal to 75% of the standards for VOC, PM, and Pb specified herein, then no additional annual testing shall be required for that pollutant during the term of this permit. If two consecutive annual tests result in specified emissions being less than or equal to 75% of the standard for SO_2, CO and NO_x, specified herein, and the permittee chooses to continue the hourly CEM data collection, then no additional annual testing shall be required for SO_2, CO and/or NO_x during the term of this permit. If the permittee chooses to continue annual testing for SO_2, CO and NO_x, operation of the SO_2, CO and/or NO_x CEM may cease if the requirements contained in number 2. Emissions Limitations specific to these pollutants for this group of emission units are met.

c. Performance tests shall be performed by the reference methods specified in Regulation 401 KAR 50:015, Section 1.

d. If the performance tests and/or compliance demonstrations are not conducted at the EAF's maximum capacity as specified herein, the performance tests and/or compliance tests shall be repeated at 50 ton production increase intervals. Measurement of a production increase shall be based on changes in the average steel production per three consecutive heats. The permittee may petition the Division for Air Quality to exclude testing for certain pollutants at each of these production increase intervals.

e. The exhaust rate of emissions referenced under number 2. Emission Limitations (c), (d) and (e) above, is to be determined based upon measurement of flow rates in the caster canopy duct, EAF canopy duct, 2 DEC ducts and LMF duct,

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combined, and converted to standard conditions over three 8-hour periods under conditions representative of normal EAF operations. The exhaust rate measurements shall be determined by EPA Methods 1 through 4. The permittee shall submit a report to the Division supporting the determination of any revised exhaust rate that is to be used in providing compliance assurance through the formula specified in number 2. Emission Limitations above. The exhaust rate is to be re-determined by the permittee if changes in operating conditions occur that would indicate that the previously-determined exhaust rate is no longer representative of normal operating conditions, and the Division concurs.

4. Specific Monitoring Requirements:

a. The permittee shall maintain and operate devices that continuously monitor and record the SO_2, NO_X, and CO concentrations of the gases in the duct leading to the baghouse, or other approved locations. The SO_2, NO_X, and CO monitors shall be operated in compliance with performance specifications 2 and 4, respectively, as contained in 40 CFR Part 60, Appendix B. The span values for the monitors shall be 100 ppm. The monitors shall be calibrated with gases of known concentrations equal to: 50 to 60 ppm, 20 to 30 ppm, 10 to 15 ppm and zero.

b. The permittee shall monitor emissions from the Melt Shop baghouse as follows:
   i. Observations of visible emissions from the Melt Shop baghouse shall be conducted at least once per day during on-line operation of the EAF.
   ii. Observations of visible emissions from the Melt Shop baghouse shall be conducted at least once per week when the EAF is off-line.
   iii. At least once per week, a qualitative visual observation shall be conducted during operation of dust handling equipment of the baghouse.
   iv. All observations of visible emissions shall be taken in accordance with Method 9: for at least three 6-minute periods, the opacity shall be recorded for each point(s) where visible emissions are observed.
   v. The visible emission observations shall begin on the date the performance test required in this permit is completed.

c. The permittee shall monitor emissions from Melt Shop openings as follows:
   i. Observations of visible emissions from the Melt Shop opening having the highest opacity shall be conducted at least once per day during on-line operation of the EAF.
   ii. Observations of visible emissions from the Melt Shop opening having the highest opacity shall be conducted at least once per week when the EAF is off-line.
   iii. All observations of visible emissions shall be taken in accordance with Method 9: as the arithmetic average of 24 or more consecutive 15-second opacity observations of emissions from the shop.

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iv. The visible emission observations shall begin on the date the performance test required in this permit is completed.

d. As an alternative to the monitoring requirements in 4.c. above, the permittee may install and monitor the furnace static pressure once per shift and either:
   i. Check the control system fan motor amperes and damper positions on a once-per-shift basis;
   ii. Install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate through each separately ducted hood; or
   iii. Install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate at the control device inlet and check and record damper positions on a once-per-shift basis.

   Should the permittee choose this option, the shop opacity standards under 2a. above shall apply only during periods when operating parameters for monitoring devices are being established as described in 1.n. above. In addition, the permittee shall perform monthly operational status inspections of the equipment that is important to the performance of the total capture system (i.e., pressure sensors, dampers, and damper switches). This inspection shall include observations of the physical appearance of the equipment (e.g., presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion). Any deficiencies shall be noted and proper maintenance performed.

e. The permittee shall inspect each load of scrap as it is received either by truck, railcar, or barge. The permittee shall maintain records of the types and amounts of scrap used during the annual stack test. The permittee shall use only scrap that is typical of the scrap used during the annual stack tests when compliance was demonstrated. A visual inspection shall be conducted of all scrap charged into the electric arc furnace to ensure only clean scrap is used. The scrap shall be largely free of foreign materials such as oil and greases and shall not contain materials likely to have excess organic material.

f. The permittee shall maintain records of the analyses on the sulfur contents of the charged and injection carbons.

5. Specific Recordkeeping Requirements:

a. The permittee shall comply with the requirements of 40 CFR 60.276a, Record keeping and reporting requirements, unless more stringent requirements are listed herein.

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b. The permittee shall keep records of the amounts of carbon charged and injected per heat, the sulfur contents, and analyses; and these records shall be available to Division personnel upon request.

c. The permittee shall maintain records of the parameters monitored to demonstrate compliance with visible emission standards as described in 4.b., 4.c. and 4.d. above.

d. The permittee shall keep records of the amounts and types, as well as a general description of the scrap or scrap substitutes, and these records shall be made available to Division personnel upon request.

e. The permittee shall keep records of the maintenance and operating parameters of the control equipment, and these records shall be made available to Division personnel upon request. The parameters shall include the pressure drop ranges, and those parameters required to be monitored by 40 CFR Subpart AAa.

f. The permittee shall keep records of the SO_2, CO, and NO_X (expressed as NO_2) concentrations recorded from the CEMs showing the corresponding steel production data and other data used to provide reasonable assurance of compliance with SO_2, NO_X, and CO emission limitations under the formula specified in Sections 2.c., 2.d., and 2.e., above. These records shall be made available to Division personnel upon request.

g. The permittee shall keep records of opacity readings made.

6. Specific Reporting Requirements:

a. The permittee shall comply with the reporting requirements of 40 CFR 60.276a.

b. The permittee shall provide quarterly written and electronically formatted reports to the Division's Frankfort Central Office containing the data provided by the continuous emission devices. All reports shall be post marked by the thirtieth (30th) day following the end of each calendar quarter and shall be submitted in the format specified by the Division. The averaging periods used for data reporting shall correspond to the averaging periods specified herein for emission limitations. The emissions shall be reported in ppm per hour, pounds per hour, pounds per ton of liquid steel tapped, tons per reporting period, and cumulative tons per year for the preceding consecutive 12 month period. The permittee shall identify the methodology used to determine the above required information in the quarterly reports. NO_X emissions shall be reported as NO_2. A file shall be kept and maintained on the following items:
    i. Emission measurement (strip charts, etc.);
    ii. Monitor performance testing measurements;

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iii. Performance evaluations;
iv. Calibration checks;
v. Adjustments and maintenance performed on such monitoring devices.

c. Within 30 days of the end of each calendar quarter, the permittee shall submit to the Division a report containing the number of excursions above the SO_2, CO and NO_X emission limitations that are indicated by the methodology established under Sections 2.c, 2.d and 2.e, above. The report shall include the date and time of the excursions, the indicated values of the excursions, and the percentage of EAF operating time during which excursions occurred in the calendar quarter.

d. The permittee shall submit to the Division on a semi-annual basis the particulate matter compliance demonstration calculation.

7. Specific Control Equipment Operating Conditions: The permittee shall install, properly maintain, and operate the control equipment in accordance with manufacturer's guidelines.

8. Alternate Operating Scenarios: None

9. Compliance Schedules: See SECTION I

10. Compliance Certification Requirements: See SECTION F

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GROUP REQUIREMENTS:

0R1 Slab Reheat Tunnel Furnace

Description: Tunnel furnace with rated heat capacity of 124.0 MMBTU/hr

Annual hours of operation: 8760 hours/year
Control Device: none
Construction Commenced: April 1993

APPLICABLE REGULATIONS:

401 KAR 51:017 Prevention of significant deterioration of air quality.

1. Operating Limitations:

a. The permittee shall use only natural gas as fuel (BACT).

b. The reheat tunnel furnace shall be equipped with ultra low NO_x burners (burners designed to maintain 0.09 lb/MM Btu) (BACT).

c. The total natural gas use shall not exceed 90.5 MMcf/month, averaged over a three-month rolling period, and 1086 MMcf/yr (Limit on PTE).

2. Emission Limitations:

a. *Opacity Standard:* None

b. *Mass Emission Standard:* None

c. *Carbon Monoxide Emission Standard:* carbon monoxide emissions shall not exceed the following limits:
   i. Total carbon monoxide emissions shall not exceed 2.83 lbs CO/hr (BACT).
   ii. Carbon monoxide emissions shall not exceed 35 lbs CO/MMcf (BACT).

d. *Nitrogen Oxide Emission Standard*: nitrogen oxide emissions, expressed as NO_2, shall not exceed the following limits:
   i. Total nitrogen oxide emissions shall not exceed 7.26 lbs NO_2/hr (BACT).
   ii. Nitrogen oxide emissions shall not exceed 0.09 lbs NO_2/MMBtu (BACT).

e. *Sulfur Dioxide Emission Standard*: None

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f. *Lead Emission Standard*: None

g. *VOC Emission Standard*: None

h. *Fugitive Emission Standard*: None

3. Testing Requirements: None

4. Specific Monitoring Requirements: The permittee shall monitor the natural gas usage on a monthly basis.

5. Specific Recordkeeping Requirements: The permittee shall keep records of the monthly natural gas usage in MMcf.

6. Specific Reporting Requirements: None

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

9. Compliance Schedules: None

10. Compliance Certification Requirements: See SECTION F

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

GROUP REQUIREMENTS:

0R2 Slab Reheat Tunnel Furnace

Description: Tunnel furnace with rated heat capacity of 80.7 MMBTU/hr

Annual hours of operation: 8760 hours/year
Control Device: none
Construction Commenced: August 1997

APPLICABLE REGULATIONS:

401 KAR 51:017 Prevention of significant deterioration of air quality.

1. Operating Limitations:

a. The permittee shall use only natural gas as fuel (BACT).

b. The reheat tunnel furnace shall be equipped with ultra low NO_x burners (burners designed to maintain 0.09 lb/MM Btu) (BACT).

c. The total natural gas use shall not exceed 90.5 MMcf/month, averaged over a three-month rolling period, and 707 MMcf/yr (Limit on PTE).

2. Emission Limitations:

a. *Opacity Standard:* None

b. *Mass Emission Standard:* None

c. *Carbon Monoxide Emission Standard:* carbon monoxide emissions shall not exceed the following limits:
   i. Total carbon monoxide emissions shall not exceed 2.83 lbs CO/hr (BACT).
   ii. Carbon monoxide emissions shall not exceed 35 lbs CO/MMcf (BACT).

d. *Nitrogen Oxide Emission Standard*: nitrogen oxide emissions, expressed as NO_2, shall not exceed the following limits:
   i. Total nitrogen oxide emissions shall not exceed 7.26 lbs NO_2/hr (BACT).
   ii. Nitrogen oxide emissions shall not exceed 0.09 lbs NO_2/MMBtu (BACT).

e. *Sulfur Dioxide Emission Standard*: None

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f. *Lead Emission Standard*: None

g. *VOC Emission Standard*: None

h. *Fugitive Emission Standard*: None

3. Testing Requirements: None

4. Specific Monitoring Requirements: The permittee shall monitor the natural gas usage on a monthly basis.

5. Specific Recordkeeping Requirements: The permittee shall keep records of the monthly natural gas usage in MMcf.

6. Specific Reporting Requirements: None

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

9. Compliance Schedules: None

10. Compliance Certification Requirements: See SECTION F

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GROUP REQUIREMENTS:

0T1 Cooling Towers

Description: Cooling towers including:

Cooling Towers, including:
Tower #1, 1 cell (existing)
Tower #2, 3 cells (2 existing cells and 1 new cell)
Tower #3, 6 cells (3 existing cells and 3 new cells)

Annual hours of operation: 8760 hours/year
Control Device: none
Construction Commenced: April, 1993, for existing; August 1, 1997, for new

APPLICABLE REGULATIONS:

401 KAR 51:017 Prevention of significant deterioration of air quality.

1. Operating Limitations:

a. The use of chromium based water treatment chemicals in the cooling towers is prohibited (40 CFR 63 Subpart Q).

b. Tower #1: Water flow rate to tower shall not exceed 12, 000 gallons per minute. Total dissolved solids concentration shall not exceed 1,050 ppm. The mist eliminator drift loss is 0.001% or less to total gpm. (Limit on PTE).

c. Tower #2: Water flow rate to tower shall not exceed 56,000 gallons per minute. Total dissolved solids concentration shall not exceed 1,330 ppm. The mist eliminator drift loss is 0.01% or less to total gpm. (Limit on PTE).

d. Tower #3: Water flow rate to tower shall not exceed 154,684 gallons per minute. Total dissolved solids concentration shall not exceed 1,050 ppm. The mist eliminator drift loss is 0.001% or less to total gpm. (Limit on PTE).

e. The permittee shall perform regular cooling tower maintenance as recommended by the vendor to assure that the drift loss is maintained at all times.

2. Emission Limitations:

a. *Opacity Standard:* None

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b. *Mass Emission Standard:* particulate emissions shall not exceed the following limits:
   i. Tower #1: Particulate emission rate shall not exceed 0.063 lb/hr (BACT).
   ii. Tower # 2: Particulate emission rate shall not exceed 3.73 lbs/hr (BACT).
   iii. Tower # 3, Particulate emission rate shall not exceed 0.81 lbs/hr (BACT).

c. *Carbon Monoxide Emission Standard:* None

d. *Nitrogen Oxide Emission Standard*: None

e. *Sulfur Dioxide Emission Standard*: None

f. *Lead Emission Standard*: None

g. *VOC Emission Standard*: None

h. *Fugitive Emission Standard*: None

3. Testing Requirements: None

4. Specific Monitoring Requirements: The permittee shall monitor the total dissolved solids concentration or conductivity in the cooling towers' water weekly until the variability is assessed. After the variability is assessed the monitor may be done monthly upon concurrence of the Division.

5. Specific Recordkeeping Requirements:

a. The permittee shall keep records of the cooling towers' TDS or conductivity, and these records shall be made available to Division personnel upon request.

b. The permittee shall keep records of maintenance, and these records shall be made available to Division personnel upon request.

6. Specific Reporting Requirements: None

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

9. Compliance Schedules: None

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10. Compliance Certification Requirements: See SECTION F

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

GROUP REQUIREMENTS:

0RP & OTR Roads

Description: Various paved and unpaved roads within the PSD-prescribed source boundary. Various paved and unpaved roads within the barge terminal boundaries.

Annual hours of operation: 8760 hours/year
Control Device: none
Construction Commenced: April, 1993 for plant roads, and July, 1975, for terminal roads

APPLICABLE REGULATIONS:

401 KAR 51:017 Prevention of significant deterioration of air quality.
401 KAR 63:010 Fugitive emissions.

1. Operating Limitations:

a. The permittee may pave any of the existing 1.0 miles of unpaved roads without permits from this Division. This does not authorize the extension, or construction, of any additional plant roads.

b. The permittee is authorized to operate 3.63 miles of paved roadways. (Limit on PTE).

c. The permittee is authorized to operate 1.0 mile of unpaved roadways. (Limit on PTE).

d. The permittee shall cover the beds of any open-bodied or flat bed trailer trucks when carrying dust-covered materials.

2. Emission Limitations: Increases and decreases in emission rates at Gallatin Transit Authority, Incorporated's barge unloading/loading facilities that are not associated with activities at the steel mill shall be reviewed as a separate independent entity. The permittee shall be responsible for demonstrating that an activity is not associated with the steel mill.

a. *Opacity Standard:* None

b. *Mass Emission Standard:* None

c. *Carbon Monoxide Emission Standard:* None

d. *Nitrogen Oxide Emission Standard*: None

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e. *Sulfur Dioxide Emission Standard*: None

f. *Lead Emission Standard*: None

g. *VOC Emission Standard*: None

h. *Fugitive Emission Standard*:
   i. 401 KAR 63:010 Section (3), the permittee shall not cause or permit the discharge of visible fugitive dust emissions beyond the lot line of the property on which the emissions originate; and
   ii. 401 KAR 63:010 Section (3), reasonable precautions shall be taken to prevent particulate matter from becoming airborne.

3. Testing Requirements: None

4. Specific Monitoring Requirements: None

5. Specific Recordkeeping Requirements: The permittee shall keep records of the dates that it swept, and applied water/dust suppressants to roadways, and these records shall be made available to the Division personnel upon request.

6. Specific Reporting Requirements: None

7. Specific Control Equipment Operating Conditions: The permittee shall employ a combination of the following to control fugitive dust emissions (both plant and terminal roads): sweeping for paved roads, watering and the use of dust suppressants, and restricting vehicles' speed on unpaved roads to 5 MPH which shall be enforced by the permittee (Work Practice BACT).

8. Alternate Operating Scenarios: None

9. Compliance Schedules: None

10. Compliance Certification Requirements: See SECTION F

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GROUP REQUIREMENTS:

0BL Barge Terminal

Description: Barge terminal facilities consist of:

Barge Loading (coal, coke, silicon, gypsum, bark mulch, slag)
Barge Unloading (steel scrap, coke, bark mulch, silicon metal, coal, alloys, scrap substitutes)
Unloading: Conveyor to Stockpiles
Loading: Stockpiles to conveyor
Six Conveyor Transfer Points
Stockpiles (coal, steel scrap, scrap substitutes, alloys, silicon, gypsum, bark mulch & coke)

Annual hours of operation: 8760 hours/year
Control Device: none
Construction Commenced: July, 1975, and April, 1986

APPLICABLE REGULATIONS:

401 KAR 51:017 Prevention of significant deterioration of air quality.
401 KAR 63:010 Fugitive emissions.

1. Operating Limitations:

a. Barge Loading rate shall not exceed 2,000 tons per hour (Limit on PTE).

b. Barge Unloading rate shall not exceed 400 tons per hour (Limit on PTE).

c. Unloading rate for conveyor to stockpiles shall not exceed 2,000 tons per hour (Limit on PTE).

d. Loading rate for stockpiles to conveyor shall not exceed 2,000 tons per hour (Limit on PTE).

e. Conveyor shall not transfer more than 2,000 tons per hour (Limit on PTE).

2. Emission Limitations: Increases and decreases in emission rates at Gallatin Transit Authority, Incorporated's barge unloading/loading facilities that are not associated with activities at the steel mill shall be reviewed as a separate independent entity. The permittee shall be responsible for demonstrating that an activity is not associated with the steel mill.

a. *Opacity Standard:* None

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b. *Mass Emission Standard:* None

c. *Carbon Monoxide Emission Standard:* None

d. *Nitrogen Oxide Emission Standard*: None

e. *Sulfur Dioxide Emission Standard*: None

f. *Lead Emission Standard*: None

g. *VOC Emission Standard*: None

h. *Fugitive Emission Standard*:
   i. 401 KAR 63:010 Section (3), the permittee shall not cause or permit the discharge of visible fugitive dust emissions beyond the lot line of the property on which the emissions originate; and
   ii. 401 KAR 63:010 Section (3), reasonable precautions shall be taken to prevent particulate matter from becoming airborne.

3. Testing Requirements: None

4. Specific Monitoring Requirements: The permittee shall perform monthly operational status inspections of the affected facilities and dust suppression equipment. The observations shall include but not be limited to, the physical appearance of all equipment.

5. Specific Recordkeeping Requirements: The permittee shall keep records documenting maintenance that was performed on dust suppression equipment. These maintenance records shall be maintained and made available for inspection by the Division upon request. Records shall be maintained of the monthly operational status inspections.

6. Specific Reporting Requirements: None

7. Specific Control Equipment Operating Conditions:

a. The permittee shall use water and/or surfactants to control fugitive dust (Work Practice BACT).

b. The permittee shall operate and maintain dust suppression equipment in accordance with manufacturer's specifications and/or standard operation practices. All deficiencies shall be noted and proper maintenance performed.

c. The permittee shall comply with the standard operating procedure (SOP) plan that was submitted to the Division.

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d. The permittee shall submit updates of changes in the SOP to the Division in semi-annual reports.

8. Alternate Operating Scenarios: None

9. Compliance Schedules: None

10. Compliance Certification Requirements: See SECTION F

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

GROUP REQUIREMENTS:

0P1 Storage piles

Description: Alloy storage piles.

Annual hours of operation: 8760 hours/year
Control Device: none
Construction Commenced: April 1993

APPLICABLE REGULATIONS:

401 KAR 51:017 Prevention of significant deterioration of air quality.
401 KAR 63:010 Fugitive emissions.

1. Operating Limitations: All alloy storage piles shall be enclosed on three sides with concrete walls (Work Practice BACT).

2. Emission Limitations:

    a. *Opacity Standard:* None

    b. *Mass Emission Standard:* None

    c. *Carbon Monoxide Emission Standard:* None

    d. *Nitrogen Oxide Emission Standard*: None

    e. *Sulfur Dioxide Emission Standard*: None

    f. *Lead Emission Standard*: None

    g. *VOC Emission Standard*: None

    h. *Fugitive Emission Standard*:
        i. 401 KAR 63:010 Section (3), the permittee shall not cause or permit the discharge of visible fugitive dust emissions beyond the lot line of the property on which the emissions originate; and
        ii. 401 KAR 63:010 Section (3), reasonable precautions shall be taken to prevent particulate matter from becoming airborne.

3. Testing Requirements: None

4. Specific Monitoring Requirements: None

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5. Specific Recordkeeping Requirements: None

6. Specific Reporting Requirements: None

7. Specific Control Equipment Operating Conditions:

a. The permittee shall comply with the standard operating procedure (SOP) plan that was submitted to the Division.

b. The permittee shall submit updates of changes in the SOP to the Division in semi-annual reports.

8. Alternate Operating Scenarios: None

9. Compliance Schedules: None

10. Compliance Certification Requirements: See SECTION F

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GROUP REQUIREMENTS:

0C1 Conveyor

Description: existing and new conveyor transfer points.

Annual hours of operation: 8760 hours/year
Control Device: none
Construction Commenced: for existing April, 1993, and August 1, 1997, for new

APPLICABLE REGULATIONS:

401 KAR 51:017 Prevention of significant deterioration of air quality.
401 KAR 63:010 Fugitive emissions.

1. Operating Limitations: All conveyors shall be enclosed and operated in a manner consistent with 401 KAR 63:010 to assure that emissions are maintained to a minimum (Work Practice BACT).

2. Emission Limitations: The permittee shall take reasonable precautions to avoid the escape of nuisance dust.

    a. *Opacity Standard:* None

    b. *Mass Emission Standard:* None

    c. *Carbon Monoxide Emission Standard:* None

    d. *Nitrogen Oxide Emission Standard*: None

    e. *Sulfur Dioxide Emission Standard*: None

    f. *Lead Emission Standard*: None

    g. *VOC Emission Standard*: None

    h. *Fugitive Emission Standard*:
        i. 401 KAR 63:010 Section (3), the permittee shall not cause or permit the discharge of visible fugitive dust emissions beyond the lot line of the property on which the emissions originate; and
        ii. 401 KAR 63:010 Section (3), reasonable precautions shall be taken to prevent particulate matter from becoming airborne.

3. Testing Requirements: None

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4. Specific Monitoring Requirements: The permittee shall perform monthly operational status inspections of the affected facilities. The observations shall include, but not be limited to, the physical appearance of all equipment.

5. Specific Recordkeeping Requirements: The permittee shall maintain records of the monthly operational status inspections.

6. Specific Reporting Requirements: The permittee shall report a summary of the monthly operational status inspections semi-annually.

7. Specific Control Equipment Operating Conditions: The permittee shall comply with the standard operating procedure (SOP) plan that was submitted to the Division.

8. Alternate Operating Scenarios: None

9. Compliance Schedules: None

10. Compliance Certification Requirements: See SECTION F

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GROUP REQUIREMENTS:

0D1 Cleaning tanks

Description: Twelve (12) parts cleaning tanks.

Annual hours of operation: 8760 hours/year
Control Device: none
Construction Commenced: April 1993

APPLICABLE REGULATIONS:

401 KAR 59:185 New solvent metal cleaning equipment.

1. Operating Limitations:

   a. The use of halogenated solvent is prohibited.

   b. The permittee shall comply with the applicable operating requirements specified by State Regulation 401 KAR 59:185, New solvent metal cleaning equipment.

2. Emission Limitations: None

3. Testing Requirements: None

4. Specific Monitoring Requirements: None

5. Specific Recordkeeping Requirements: None

6. Specific Reporting Requirements: None

7. Specific Control Equipment Operating Conditions: The permittee shall comply with the applicable control equipment requirements specified by State Regulation 401 KAR 59:185, New solvent metal cleaning equipment.

8. Alternate Operating Scenarios: None

9. Compliance Schedules: None

10. Compliance Certification Requirements: See SECTION F

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GROUP REQUIREMENTS:

0EG Generators

Description: Three emergency generators:

Existing Tunnel furnace emergency generator, rated power1,500 KW (1993)
Existing Pumphouse emergency generator, rated power 1,000 KW (1993)
New Tunnel furnace emergency generator, rated power 1500 KW (1997)

Annual hours of operation: 60 hours/year
Control Device: none
Construction Commenced: for existing April, 1993, and August 1, 1997, for new

APPLICABLE REGULATIONS:

401 KAR 51:017 Prevention of significant deterioration of air quality.

1. Operating Limitations:

a. The permittee shall use low sulfur diesel fuel (less than 5% sulfur) in the emergency generators (Limit on PTE).

b. Each emergency generator shall operate no more than 60 hours in any consecutive 12 month period (Limit on PTE).

2. Emission Limitations: None

3. Testing Requirements: None

4. Specific Monitoring Requirements: None

5. Specific Recordkeeping Requirements: The permittee shall keep records of each emergency generator's monthly hours of operation.

6. Specific Reporting Requirements: The permittee shall, if requested by the Division, submit a written report within 30 days following the end of each month of the emergency generators' hours of operation.

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

9. Compliance Schedules: None

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10. Compliance Certification Requirements: See SECTION F

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GROUP REQUIREMENTS:

0S1 & 0S2 Miscellaneous dust, construction commenced: April 1993 and August 1997
0B1 & 0B2

Description: Miscellaneous dust sources consisting of:

Constructed April 1993:
EAF Baghouse Dust Silo, Three Injection Carbon Silos
Lime/Carbon System – Scrap Bucket Additions: Rail & Truck Car Unloading Station, Carbon Silo #1, Lime Silo #2, Lime/Lime Silo #3, Transfer into Buckets 1 &2

Constructed August 1997:
EAF Baghouse Dust Silo, Three Injection Carbon Silos
Lime/Carbon System – Scrap Bucket Additions: Rail & Truck Car Unloading Station, Carbon Silo #1, Lime Silo #2, Lime/Lime Silo #3, Transfer into Buckets 1 &2, Transfer into Bucket 3

Constructed TBD 2004:
Lime Handling System – Closed conveyors, weigh/surge bins, various dust collection and prevention devices

Annual hours of operation:	8760 hours/year
Control Device:	baghouse bin vents, various dust collection and prevention
Construction Commenced:	April 1993, August 1997, TBD 2004

APPLICABLE REGULATIONS:

401 KAR 60:005 40 CFR Part 60, Subpart AAa Standards of performance for steel plants: electric arc furnaces and argon-oxygen decarburization vessels.
401 KAR 51:017 Prevention of significant deterioration of air quality.
401 KAR 59:010 New process operations.
401 KAR 63:010 Fugitive emissions.

1. Operating Limitations: None

2. Emission Limitations:

   a. *Opacity Standard:*
      i. Except for the EAF baghouse dust silos (new and existing), visible emissions from the listed affected facilities shall not equal or exceed 20% opacity (401 KAR 59:010).
      ii. Visible emissions from the EAF baghouse dust silos shall not equal or exceed 10% opacity, on and after the date on which the performance test required to be conducted is completed (40 CFR 60.272b).

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b. *Mass Emission Standard:* None

c. *Carbon Monoxide Emission Standard:* None

d. *Nitrogen Oxide Emission Standard*: None

e. *Sulfur Dioxide Emission Standard*: None

f. *Lead Emission Standard*: None

g. *VOC Emission Standard*: None

h. *Fugitive Emission Standard*:
   i. 401 KAR 63:010 Section (3), the permittee shall not cause or permit the discharge of visible fugitive dust emissions beyond the lot line of the property on which the emissions originate; and
   ii. 401 KAR 63:010 Section (3), reasonable precautions shall be taken to prevent particulate matter from becoming airborne.

3. Testing Requirements:

a. With respect to the EAF baghouse dust silos (new and existing), the permittee shall comply with the requirements of 40 CFR 60.275a, test methods and procedures.

b. The permittee shall determine the opacity, during operation, from each stack or vent by Reference Method 9 on a quarterly basis, or more frequently if requested by the Division. If an exceedance of the opacity limit is determined, the permittee shall conduct Reference Method 9 until five consecutive monitoring days demonstrate compliance with the opacity limit.

c. See SECTION G 4. below.

4. Specific Monitoring Requirements:

a. The permittee shall perform a qualitative visual observation of the opacity of emissions from each stack/vent on a weekly basis. Visual observation shall be made of whether any air emissions (except for water vapor) are visible from the vent/stack and the permittee shall determine whether any visible emissions are normal for the process. If no visible emissions are observed then no further monitoring is required. If visible emissions are observed, the permittee shall perform a Method 9 reading. The opacity observed shall be recorded in the weekly log. The reading shall be performed by a representative of the permittee

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certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

d. The permittee shall perform an inspection of the control equipment for any necessary repairs if visual emissions from any stack/vent is abnormal or exceeds the applicable standard.

e. The permittee shall perform monthly operational status inspections of the affected facilities and dust suppression equipment. The observations shall include but not be limited to, the physical appearance of all equipment.

5. Specific Recordkeeping Requirements:

a. The permittee shall maintain a log of the weekly qualitative visual observations of the opacity of the emissions from each stack/vent. The log shall note: (1) whether any air emissions (except for water vapor) were visible from the vent/stack; (2) all emission points from which visible emissions occurred; and (3) whether the visible emissions were normal for the process.

b. The permittee shall keep records documenting all deficiencies noted during the monthly operational status inspections and the resulting maintenance that was performed.

c. Maintenance records relating to opacity of emissions shall be maintained and made available for inspection by the Division upon request.

6. Specific Reporting Requirements: Any exceedances of the opacity limit shall be reported to the Division within 30 days. Following an exceedance, the company shall submit the daily, Reference Method 9, visible emission readings for this emission point, within 30 days of the end of the calendar month.

7. Specific Control Equipment Operating Conditions:

a. EAF Baghouse Dust Silos - Install, operate and maintain a baghouse designed to control particulate grain loading to 0.005 grain/dscf and the flow rate to 100 dscf/m (Work Practice BACT).

b. Injection Carbon Silo #1- Install, operate and maintain a bin vent filter designed to control particulate grain loading to 0.01 grain/dscf and the flow rate to 1500 dscf/m (Work Practice BACT).

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c. Injection Carbon Silo #2 and #3- Install, operate and maintain a bin vent filter designed to control particulate grain loading to 0.01 grain/dscf and the flow rate to 650 dscf/m (Work Practice BACT).

d. Rail & Truck Car Unloading - Install, operate and maintain a baghouse designed to control particulate grain loading to 0.01 grain/dscf and the flow rate to 5000 dscf/m.

e. Carbon Silos #1- Install, operate and maintain a bin vent filter designed to control particulate grain loading to 0.01 grain/dscf and the flow rate to 900 dscf/m (Work Practice BACT).

f. Lime Silos #2 - Install, operate and maintain a bin vent filter designed to control particulate grain loading to 0.01 grain/dscf and the flow rate to 900 dscf/m (Work Practice BACT).

g. Lime/Lime Silos #3 - Install, operate and maintain a bin vent filter designed to control particulate grain loading to 0.01 grain/dscf and the flow rate to 900 dscf/m (Work Practice BACT).

h. Transfers into Buckets 1 &2 - Install, operate and maintain a baghouse designed to control particulate grain loading to 0.01 grain/dscf and the flow rate to 5000 dscf/m (Work Practice BACT).

i. Lime/Flux Material Handling System - Install, operate and maintain a pulse-jet dust collector designed to control particulate grain loading to 0.005 gr/acf average and the flow rate to 7500 acf/m (Work Practice BACT).

j. The permittee shall comply with the standard operating procedure (SOP) plan that was submitted to the Division to ensure that the specified limitations are being met. The SOP plan shall include, but not be limited to, pressure drops, where applicable, normal visual emissions, standard maintenance schedules.

k. The permittee shall submit updates of changes in the SOP to the Division in semi-annual reports.

l. The permittee shall operate and maintain baghouses and bin vent filters in accordance with manufacturer's specifications and/or standard operation practices and shall perform proper maintenance of any deficiencies noted during monthly operational status inspections.

8. Alternate Operating Scenarios: None

9. Compliance Schedules: None

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10. Compliance Certification Requirements:

a. See SECTION F

b. The permittee shall certify to the Division, annually, that a daily visible emission survey was conducted for any emission point that became subject to a daily visible emission survey under Section 3. The certification shall indicate whether the emission point was in compliance with the applicable opacity requirements.

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GROUP REQUIREMENTS:

0RC Recycling & Coal Drying

Description: refractory brick and post-combustion material recycling consisting of:

Constructed September 2001:
Receiving Hopper for Spent Refractory Brick
36' Belt Feeder
3' x 4' Grizzly Screen
Primary Crusher (Portable 4233 Horizontal Shaft Impactor)
30" Crusher Discharge Conveyor with Cross-Belt Magnet
Stockpile (For Ferrous Materials Captured by Cross-Belt Magnet)
Scalping Screen (4' x 8' Single Deck)
24" Returns Conveyor
24" Stacking Conveyor
Crushed Brick Stockpile
Crushed Brick Truck Loadout
Dead Burned Magnesite Stockpile
Magnesite Truck Loadout
Receiving Hopper for Post-Combustion Waste
Scalping Screen for Post-Combustion Waste (5' x 7' Double Deck)
36" Screen Discharge Conveyor
Stockpile (For Screened Post-Combustion Waste)
Loadout by Front-End Loader (For Screened Post-Combustion Waste to Auger Receiving Hopper)
Stockpile (For Oversized Material From Screen)
Receiving Hopper (For Screened Post-Combustion Waste)
24" Screen Feed Conveyor
Scalping Screen (4' x 8' Single Deck)
Stockpile (For Oversized Material From Screen)
Bucket Elevator
110 Storage Silo (For Screened Post-Combustion Material)
110 Storage Silo (For 90/10 Mixture of Coal and Dolomite)
Truck Loadout (For Screened Post-Combustion Material and Coal/Dolomite Mixture)

Constructed June 2004:
Rotary Dryer with rated heat capacity of 12 MMBTU/hr
Conveying Systems – Belt Conveyor, Screw Augers
Three Wet Feed Bins

Annual hours of operation:	8760 hours/year
Control Device:	Fabric filter dust collector
Construction Commenced:	September 2001, June 2004

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APPLICABLE REGULATIONS:

401 KAR 60:005 40 CFR Part 60, Subpart Y Standard of performance for coal preparation plants.
401 KAR 63:010 Fugitive emissions.

1. Operating Limitations:

a. Internal Conveyor (24" Screen Feed Conveyor) (22) loading rate shall not exceed 25 tons per hour and 219,000 tons per year (Limited by rotary dryer).

b. Screen (Scalping Screen 4' x 8' Single Deck) rate shall not exceed 25 tons per hour and 219,000 tons per year (Limited by rotary dryer).

c. Bucket Elevator (From Screen 21 to Silo 24) rate shall not exceed 25 tons per hour and 219,000 tons per year (Limited by rotary dryer).

d. Storage Silo (110 Ton Storage Silo for Screened Post-Combustion Material) rate shall not exceed 25 tons per hour and 219,000 tons per year (Limited by rotary dryer).

e. The permittee shall use either propane or natural gas as fuel for the rotary dryer.

2. Emission Limitations:

a. *Opacity Standard:* As provided in 40 CFR 60.252 (a), the visible emissions as determined by US EPA's Method 9 shall meet the following limits:
   i. Less than twenty (20) percent opacity exiting the rotary dryer;
   ii. Less than twenty (20) percent opacity exiting any coal processing and conveying equipment, coal storage system, or coal transfer and loading system.

b. *Mass Emission Standard:* Particulate emissions from the rotary dryer stack shall not equal or exceed 0.031 gr/dscf (40 CFR Part 60, Subpart Y).

c. *Carbon Monoxide Emission Standard:* None

d. *Nitrogen Oxide Emission Standard*: None

e. *Sulfur Dioxide Emission Standard*: None

f. *Lead Emission Standard*: None

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

g. *VOC Emission Standard*: None

h. *Fugitive Emission Standard*:
   i. 401 KAR 63:010 Section (3), the permittee shall not cause or permit the discharge of visible fugitive dust emissions beyond the lot line of the property on which the emissions originate; and
   ii. 401 KAR 63:010 Section (3), reasonable precautions shall be taken to prevent particulate matter from becoming airborne.

3. Testing Requirements: See SECTION G 4. below.

4. Specific Monitoring Requirements:

a. The permittee shall perform a qualitative visual observation of the opacity of emissions from each stack/vent on a weekly basis. Visual observation shall be made of whether any air emissions (except for water vapor) are visible from the vent/stack and the permittee shall determine whether any visible emissions are normal for the process. If no visible emissions are observed then no further monitoring is required. If visible emissions are observed, the permittee shall perform a Method 9 reading. The opacity observed shall be recorded in the weekly log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

b. The permittee shall perform monthly operational status inspections of the affected facilities and dust suppression equipment. The observations shall include but not be limited to, the physical appearance of all equipment.

5. Specific Recordkeeping Requirements:

a. The permittee shall maintain a log of the weekly qualitative visual observations of the opacity of the emissions from each stack/vent. The log shall note: (1) whether any air emissions (except for water vapor) were visible from the vent/stack; (2) all emission points from which visible emissions occurred; and (3) whether the visible emissions were normal for the process.

b. The permittee shall keep records documenting maintenance that was performed on dust suppression equipment. These maintenance records shall be maintained and made available for inspection by the Division upon request.

6. Specific Reporting Requirements: None

7. Specific Control Equipment Operating Conditions:

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

a. The permittee shall use water and/or surfactants to control fugitive dust (Work Practice).

b. The permittee shall operate and maintain dust suppression equipment in accordance with manufacturer's specifications and/or standard operation practices. All deficiencies shall be noted and proper maintenance performed.

c. The permittee shall comply with the standard operating procedure (SOP) plan that was submitted to the Division.

d. The permittee shall submit updates of changes in the SOP to the Division in semi-annual reports.

8. Alternate Operating Scenarios: None

9. Compliance Schedules: None

10. Compliance Certification Requirements: See SECTION F

SECTION C – INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:020, Section 6. While these activities are designated as insignificant the permittee must comply with the applicable regulation and some minimal level of periodic monitoring may be necessary.

	Description	Generally Applicable Regulation
1.	Existing HCl dip tank	None
2.	Existing coil identification system	None
3.	Melt Shop portable arc welders	401 KAR 63:010
4.	Melt Shop cutting torches	401 KAR 63:010
5.	Melt Shop portable plasma cutter	401 KAR 63:010
6.	Melt Shop shell/ladle/tundish maintenance and repair	401 KAR 63:010
7.	Tundish spray stations	401 KAR 63:010
8.	Rolling mill plasma cutter at coiler	401 KAR 63:010
9.	Caster area cutting torch drops	401 KAR 63:010
10.	Cutting Torch to Ignite Oxygen Lance	401 KAR 63:010
11.	Steel scrap yard torch cutting, including railcar torch cutting	401 KAR 63:010
12.	Cutting torch for liquid steel break out cleanup	401 KAR 63:010
13.	Cleanup and cutting of dummy bar at caster	401 KAR 63:010
14.	Caster Area Mold Powder Pouring into Spray Chamber	401 KAR 63:010
15.	Reheat Furnace Area maintenance Welding Area	401 KAR 63:010
16.	Reheat Furnace Scale Handling	401 KAR 63:010
17.	6 Stand Rolling Mill	401 KAR 63:010
18.	Rolling Mill Steam Cleaners	401 KAR 63:010
19.	Rolling Mill Cutting Torches	401 KAR 63:010
20.	Rolling Mill Maintenance Welding Area	401 KAR 63:010
21.	Rolling Mill High Pressure Descale Operation	401 KAR 63:010
22.	Roll Grinding (3)	401 KAR 63:010
23.	Scale Pits	401 KAR 63:010
24.	Rolling Mill Shear Station	401 KAR 63:010

SECTION C – INSIGNIFICANT ACTIVITIES

25.	Portable Welders	401 KAR 63:010
26.	Baghouse Portable Cutting Torches	401 KAR 63:010
27.	Pump House Sludge Filter Press	401 KAR 63:010
28.	Scrap Truck Dump	401 KAR 63:010
29.	Scrap Bucket Charging	401 KAR 63:010
30.	Alloy Handling	401 KAR 63:010
31.	Scrap Storage and Handling	401 KAR 63:010
32.	Outside Maintenance Equipment	401 KAR 63:010
33.	Miscellaneous Heater (each natural Gas-fired and < 1 MMBtu/hr)	401 KAR 63:010
34.	Various Pieces of Mobile Equipment	401 KAR 63:010
35.	Miscellaneous Petroleum and non-petroleum storage tanks each with capacity < 10,567 gallons	401 KAR 59:050
36.	Replacement/repair of control equipment	401 KAR 63:010
37.	Parking lots	401 KAR 63:010
38.	Miscellaneous kerosene space heaters (seasonal use)	None
39.	Three locomotives (two existing, one new)	None
40.	Emergency electric generators and emergency fire fighting water pump engines (except boiler) rated ≤ 500 hp that use only gasoline, natural gas, LP gas, or distillate oils that are operated < 500 hours/year (as verified by appropriate records)	None
41.	Wastewater treatment facilities used for domestic sewage only, excluding combustion or incineration equipment	None
42.	Laboratory fume hoods and vents used exclusively for chemical or physical analysis or for bench-scale production R & D facilities	None
43.	Indirect heat exchangers or water heaters rated ≤ 1 MMBtu/hr actual heat input that use #2 fuel oil, wood, natural gas, LP gas, or refinery fuel gas.	None
44.	Use of rolling mill lubricants during hot rolling	None
45.	Scrap cutting from slag pot	401 KAR 63:010
46.	Cooling tower – 4200 gallons/minute	401 KAR 59:010 40 CFR 63 Subpart Q
47.	Duct maintenance and repair	401 KAR 63:010

SECTION D – SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1. As required by Section 1b of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26; compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.

2. The permittee shall only use natural gas as fuel in combustion emission units, except for the emergency generators that shall use diesel fuel. Each combustion unit shall be equipped with low NO_x burners unless otherwise specified herein.

3. Except as otherwise provided herein, hourly BACT emission limitations shall be averaged over three heats unless a corresponding compliance demonstration requires a longer averaging period.

4. Compliance with Work Practice BACT limitations established herein shall be based upon a one-month average.

5. Compliance with annual limitations established herein shall be based upon total monthly emissions during any consecutive 12-month period.

6. No oils or lubricants shall be applied to slabs or coils, other than those approved by the Division.

7. The permittee shall take reasonable precautions to prevent particulate fugitive dust emissions from becoming airborne. Visible fugitive dust emissions beyond the property line are prohibited. (401 KAR 63:010).

8. If the National Park Service demonstrates that the increases in emissions allowed by this permit adversely impact the air quality-related values of Mammoth Cave, and the Division concurs, this permit shall be re-opened in accordance with Regulation 401 KAR 52:020, Section 19. (40 CFR Part 52 & 401 KAR 51:017).

SECTION E – SOURCE CONTROL EQUIPMENT REQUIREMENTS

Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

SECTION F – MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS

1. Pursuant to Section 1b (IV)1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:

    a. Date, place (as defined in this permit), and time of sampling or measurements;
    b. Analyses performance dates;
    c. Company or entity that performed analyses;
    d. Analytical techniques or methods used;
    e. Analyses results; and
    f. Operating conditions during time of sampling or measurement.

2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [Sections 1b(IV) 2 and 1a(8) of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

3. In accordance with the requirements of 401 KAR 52:020 Section 3(1)h the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:

    a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
    b. To access and copy any records required by the permit;
    c. Sample or monitor, at reasonable times, substance or parameters to assure compliance with the permit or any applicable requirements.

    Reasonable times are defined as during all hours of operation, during normal office hours, or during and emergency.

4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

5. Summary reports of any monitoring required by this permit, other than continuous emission or opacity monitors, shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation

SECTION F – MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS

[Section 1b (V)1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

6. The semi-annual reports are due by January 30th and July 30th of each year. Data from the continuous emission and opacity monitors shall be reported to the Technical Services Branch in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All reports shall be certified by a responsible official pursuant to 401 KAR 52:020 Section 23. All deviations from permit requirements shall be clearly identified in the reports.

7. In accordance with the provisions of 401KAR 50:055 Section 1, the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:

    a. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown or immediately following the decision to shut down if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
    b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall cause written notice upon request.

8. The owner or operator shall report emission related exceedances from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Section F.7. above) to the Regional Office listed on the front of this permit within 30 days. Other deviations from permit requirements shall be included in the semiannual report required by Section F.6 [Section 1b (V) 3, 4. of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

9. Pursuant to 401 KAR 52:020, Permits, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit and the U.S. EPA in accordance with the following requirements:

    a. Identification of each term or condition;
    b. Compliance status of each term or condition of the permit;
    c. Whether compliance was continuous or intermittent;
    d. The method used for determining the compliance status for the source, currently and over the reporting period.

SECTION F – MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS

e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.
f. The certification shall be postmarked by January 30th of each year. Annual compliance certifications should be mailed to the following addresses:

Division for Air Quality
Florence Regional Office
8020 Veterans Memorial Drive
Florence, KY 41042

Division for Air Quality
Central Files
803 Schenkel Lane
Frankfort, KY 40601

US EPA Region IV
Air Enforcement Branch
Atlanta Federal Center
61 Forsyth St.
Atlanta GA 30303-8960

10. In accordance with 401 KAR 52:020, Section 22, the permittee shall provide the Division with all information necessary to determine its subject emissions within thirty (30) days of the date the KYEIS emission survey is mailed to the permittee.

11. Pursuant to Section VII (3) of the policy manual of the Division for Air Quality as referenced in 401 KAR 50:016, Section 1(1), results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days after the completion of the fieldwork.

12. The Cabinet may authorize the temporary use of an emission unit to replace a similar unit that is taken off-line for maintenance, if the following conditions are met:

    a. The owner or operator shall submit to the Cabinet, at least ten (10) days in advance of replacing a unit, the appropriate Forms DEP7007AI to DD that show:
        i. The size and location of both the original and replacement units; and
        ii. Any resulting change in emissions;
    b. The PTE of the replacement unit shall not exceed that of the original unit by more than twenty-five (25) percent of a major source threshold, and the emissions from the unit shall not cause the source to exceed the emissions allowable under the permit;
    c. The PTE of the replacement unit or the resulting PTE of the source shall not subject the source to a new applicable requirement;
    d. The replacement unit shall comply with all applicable requirements;
    e. The source shall notify Regional Office of all shutdowns and start-ups; and

SECTION F – MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS

f. Within six (6) months after installing the replacement unit, the owner or operator shall:
   i. Re-install the original unit and remove or dismantle the replacement unit; or
   ii. Submit an application to permit the replacement unit as a permanent change.

SECTION G – GENERAL CONDITIONS

1. General Compliance Requirements

   a. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:020 and of the Clean Air Act and is grounds for enforcement action including but not limited to termination, revocation and reissuance, revision or denial of a permit [Section 1a, 3 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020 Section 26].

   b. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a, 6 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

   c. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:020, Section 19. The permit will be reopened for cause and revised accordingly under the following circumstances:
      i. If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:020, Section 12;
      ii. The Cabinet or the U. S. EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
      iii. The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

   d. Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Re-openings shall be made as expeditiously as practicable. Re-openings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency;

   e. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or compliance with the conditions of this permit [Section 1a, 7,8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

SECTION G – GENERAL CONDITIONS

f. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such facts or corrected information to the permitting authority [401 KAR 52:020, Section 7(1)].

g. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a, 14 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

h. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a, 4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

i. Except for requirements identified in this permit as state-origin requirements, all terms and conditions shall be enforceable by the United States Environmental Protection Agency and citizens of the United States [Section 1a, 15 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

j. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6) [Section 1a, 10 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

k. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:020, Section 11(3)(b)].

l. This permit does not convey property rights or exclusive privileges [Section 1a, 9 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

m. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Kentucky Cabinet for Environmental and Public Protection or any other federal, state, or local agency.

n. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry [401 KAR 52:020, Section 11(3)(d)].

o. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders [401 KAR 52:020, Section 11(3)(a)].

SECTION G – GENERAL CONDITIONS

p. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.

q. Pursuant to 401 KAR 52:020, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of issuance. Compliance with the conditions of a permit shall be considered compliance with:
   i. Applicable requirements that are included and specifically identified in the permit; and
   ii. Non-applicable requirements expressly identified in this permit.

r. Pursuant to Section VII 2.(1) of the policy manual of the Division for Air Quality as referenced by 401 KAR 50:016, Section 1.(1), at least one month prior to the date of a required performance test, the permittee shall complete and return a Compliance Test Protocol (Form DEP 6027) to the Division's Frankfort Central Office. Pursuant to 401 KAR 50:045, Section 5, the Division shall be notified of the actual test date at least ten (10) days prior to the test.

2. Permit Expiration and Reapplication Requirements

a. This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:020, Section 12].

b. The authority to operate granted shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:020 Section 8(2)].

3. Permit Revisions

a. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the SIP or in applicable requirements and meet the relevant requirements of 401 KAR 52:020, Section 14(2).

SECTION G – GENERAL CONDITIONS

b. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.

4. Construction, Start-Up, and Initial Compliance Demonstration Requirements

a. Pursuant to a duly submitted application, the Kentucky Division for Air Quality hereby authorizes the construction of the equipment described herein, new emission points at Group OS1/OS2 and OB1/OB2 consisting of a new lime handling system and associated control equipment in accordance with the terms and conditions of this permit.

b. Construction of any process and/or air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this permit.

c. Within thirty (30) days following commencement of construction and within fifteen (15) days following start-up and attainment of the maximum production rate specified in the permit application, or within fifteen (15) days following the issuance date of this permit, whichever is later, the permittee shall furnish to the Regional Office listed on the front of this permit in writing, with a copy to the Division's Frankfort Central Office, notification of the following:
   i. The date when construction commenced.
   ii. The date of start-up of the affected facilities listed in this permit.
   iii. The date when the maximum production rate specified in the permit application was achieved.

d. Pursuant to 401 KAR 52:020, Section 3(2), unless construction is commenced within eighteen (18) months after the permit is issued, or begins but is discontinued for a period of eighteen (18) months or is not completed within a reasonable timeframe then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Upon written request, the Cabinet may extend these time periods if the source shows good cause.

e. For those affected facilities for which construction is authorized by this permit, a source shall be allowed to construct with the proposed permit. Operational or final permit approval is not granted by this permit until compliance with the applicable standards specified herein has been demonstrated pursuant to 401 KAR 50:055. If compliance is not demonstrated within the prescribed timeframe provided in 401 KAR 50:055, the source shall operate thereafter only for the purpose of

SECTION G – GENERAL CONDITIONS

demonstrating compliance, unless otherwise authorized by Section I of this permit or order of the Cabinet.

f. This permit shall allow time for the initial start-up, operation, and compliance demonstration of the affected facilities listed herein. However, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration (test) on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. These performance tests must also be conducted in accordance with SECTION G 4.h. of this permit and the permittee must furnish to the Division for Air Quality's Frankfort Central Office a written report of the results of such performance test.

g. Terms and conditions in this permit established pursuant to the construction authority of 401 KAR 51:017 or 401 KAR 51:052 shall not expire.

h. Pursuant to Section VII 1 (2 and 3) of the policy manual of the Division for Air Quality as referenced by 401 KAR 50:016, Section 1.(1), if a demonstration of compliance, through performance testing was made at a production rate less than the maximum specified in the application form, then the permittee is only authorized to operate at a rate that is not greater than 110% of the rate demonstrated during performance testing. If and when the facility is capable of operation at the rate specified in the application, compliance must be demonstrated at the new production rate if required by the Division.

5. Acid Rain Program Requirements

If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

6. Emergency Provisions

a. Pursuant to 401 KAR 52:020 Section 24(1), an emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
   i. An emergency occurred and the permittee can identify the cause of the emergency;
   ii. The permitted facility was at the time being properly operated;
   iii. During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and,

SECTION G – GENERAL CONDITIONS

iv. Pursuant to 401 KAR 52:020, 401 KAR 50:055, and KRS 224.01-400, the permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
v. This requirement does not relieve the source of other local, state or federal notification requirements.

b. Emergency conditions listed in General Condition 6(a) above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:020, Section 24(3)].

c. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:020, Section 24(2)].

7. Risk Management Provisions

a. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to:

RMP Reporting Center
P.O. Box 3346
Merrifield, VA, 22116-3346

b. If requested, the permittee shall submit additional relevant information to the Division or the U.S. EPA.

8. Ozone Depleting Substances

a. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
i. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
ii. Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
iii. Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION G – GENERAL CONDITIONS

iv. Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the record keeping requirements pursuant to 40 CFR 82.166.
v. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
vi. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

b. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners*.

SECTION H – ALTERNATE OPERATION SCENARIOS

The alternate operating scenarios set forth below have been approved by the Division based on information supplied with the application and during the application review process. The terms and conditions of each alternate operating scenario have been developed to ensure compliance with the applicable regulations. The permittee, when making a change from one operating scenario to another, shall record contemporaneously in a log at the permitted facility a record of the scenario under which the facility is operating. The permit shield, as provided in Section G, shall extend to each alternate operating scenario set forth in this Section. All conditions not specified under an alternate operating scenario shall remain unchanged from their permit values or requirements.

1. Alternate Operating Scenario #1: EPs 0E1 & 0E2 – Existing Melt Shop

a. The following raw materials usage rates for the twin shell EAF (including the replacement of the heel) shall not be exceeded:
    i. 270 tons scrap or substitute/heat (limit on PTE).
    ii. 12 tons lime/heat (limit on PTE).
    iii. 7 tons carbon/heat (limit on PTE).
b. Steel production rate shall not exceed 200 tons per hour (combined production rate, averaged over 24 hours) from the twin shell EAF as measured at the outlet of the caster. Simultaneous arc operation in both shells is prohibited (limit on PTE).
c. The permittee is authorized to operate under this scenario at any time without further authorization from the Division.

2. Alternate Operating Scenario #2: 0E1 & 0E2 – Existing Melt Shop

a. The following raw materials usage rates for the twin shell EAF (including the replacement of the heel) shall not be exceeded:
    i. 270 tons scrap or substitute/heat (limit on PTE).
    ii. 12 tons lime/heat (limit on PTE).
    iii. 7 tons carbon/heat (limit on PTE).
b. Steel production rate shall not exceed 200 tons per hour (combined production rate, averaged over 168 hours) from the twin shell EAF as measured at the outlet of the caster. Simultaneous arc operation in both shells is prohibited (limit on PTE).
c. Provided that all other limits, conditions and compliance demonstrations have been achieved as described in SECTION B above, the permittee is authorized to operate under this scenario when:
    i. The permittee informs the Division, in writing, of their intent to change;
    ii. Compliance has been demonstrated under this scenario; and
    iii. The permittee has received written confirmation and authorization from the Division for the change.
d. Under this scenario, should the permittee be unable to maintain compliance with all other limits, conditions and compliance demonstrations described in SECTION B above, the permittee shall revert to operating under Alternate Scenario 1.

SECTION H – ALTERNATE OPERATION SCENARIOS

e. Should the permittee be unable to resume operation under this scenario within 6 months of downgrading to Scenario 1, the permittee shall seek re-authorization as described in 2c. above.

3. Alternate Operating Scenario #3: 0E1 & 0E2 – Existing Melt Shop

a. Steel production rates shall not exceed 300 tons per hour (combined production rate, averaged over 168 hours) from the twin shell EAF as measured at the outlet of the caster. Simultaneous arc operation in both shells is prohibited (limit on PTE).
b. Provided that all other limits, conditions and compliance demonstrations have been achieved as described in SECTION B above, the permittee is authorized to operate under this scenario when:
    i. The permittee informs the Division, in writing, of their intent to change to a specific production rate > 200 tons per hour but < 300 tons per hour;
    ii. Compliance has been demonstrated at this specific, increased production rate; and
    iii. The permittee has received written confirmation and authorization for the change.
c. Should the permittee be unable to maintain compliance with all other limits, conditions and compliance demonstrations described in SECTION B above, the permittee shall revert to operating under Alternate Scenario 2.
d. Should the permittee be unable to resume operation under this scenario within 6 months of downgrading to Scenario 2, the permittee shall seek re-authorization as described in 3b. above.
e. Should the permittee wish to change any production rate increase previously approved by the Division under this scenario, the permittee shall seek re-authorization as described in 3b. above.

SECTION I – COMPLIANCE SCHEDULE

This section contains compliance schedule requirements as specified by Section 1c of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26. Progress reports on this schedule must be submitted at least semiannually, or at more frequent intervals if required in the specific conditions outlined below. Reports shall include the following items: (a) Dates scheduled for achieving each milestone, and the actual date that compliance is achieved; and (b) An explanation of why dates in /the schedule of compliance were not or will not be met, and preventive or corrective measures adopted to ensure that compliance with future items will be brought back on schedule. Compliance certifications shall be mailed to the addresses listed in SECTION F.

1. The permittee shall comply with the terms and conditions of the Consent Decree for Civil Action 99-30 (see attached).

2. The permittee shall be allowed six months to complete the installation of the CEM for the SO_2 from the issuance of this proposed permit.

3. Compliance with the terms and conditions of this Section shall be certified semiannually, to the Division for Air Quality when compliance has been achieved. The compliance certification shall include the following:

    a. The identification of the permit term or condition in this Section that is the basis of the certification;
    b. The compliance status;
    c. The method used for determining compliance over the reporting period, and whether the method provided continuous or intermittent data; and
    d. The method currently used for determining compliance.

4. Compliance certifications shall be mailed to the addresses listed in SECTION F (9)(f).

APPENDIX I – MELT SHOP PARTICULATE EMISSIONS: PRELIMINARY COMPLIANCE DEMONSTRATION

The permittee shall perform, at minimum, preliminary air quality testing as described below (the permittee shall remain free to implement testing procedures above and beyond those described).

1. Testing Protocol Submission Requirements: The permittee shall submit an initial testing protocol no later than 30 days after the issuance of the proposed permit. Should the Division find the protocol deficient, the permittee shall have 15 days after receipt of the Division's response to submit a new protocol. Failure to submit an approvable protocol shall constitute a violation of this permit. All testing protocols must be approved by the Division before implementation; implementation of protocols not approved by the Division will be considered invalid.

2. Testing Date Requirements: The permittee shall perform testing according to the following timing guidelines:

    a. The permittee shall perform 4 days of cold weather testing and 4 days of warm weather testing.
    b. Cold weather testing shall occur anytime between December 1 and April 1.
    c. Warm weather testing shall occur anytime between June 1 and October 1.
    d. All test results shall be submitted to the Division no later than 30 days after the last day of each individual 30-day test period.

3. Testing Production Requirements: For the duration of testing, the permittee shall operate under the following conditions:

    a. All testing shall be preceded by at least 2 days of continuous production at the highest rate achievable under the conditions outlined in this permit.
    b. The permittee shall maintain continuous, 24-hour production at the highest rate achievable under the conditions outlined in this permit.
    c. The permittee shall produce a viable product.
    d. The permittee shall melt scrap mixes containing no more than 35% scrap substitute.
    e. For the testing results to be acceptable, all other Melt Shop activities and processes not specifically referenced must operate under normal conditions as determined by field inspectors.

4. Monovent Testing Requirements:

    a. For the duration of testing, the permittee shall continuously measure particulate emissions from both monovents according to the methods approved by the Division, developed by Ambient Air Services and described in Gallatin Steel's January 12, 2004 submittal.
    b. Data coverage of the four-day warm or cool weather testing must $\geq$ 90%.

APPENDIX I – MELT SHOP PARTICULATE EMISSIONS: PRELIMINARY COMPLIANCE DEMONSTRATION

c. If, due to human error or equipment malfunction, data coverage for the four days is < 90%, the permittee shall continue for a time to be specified by the Division but no longer than 24 hours.

5. Melt Shop Doors Testing Requirements: For the duration of testing, the permittee shall:

   a. Continuously measure particulate emissions at each of the 5 Melt Shop doors labeled ASCRAP, ASLAG, CSLAG,CSCRAP, and M26 according to the manifold protocol approved by the Division, developed by Gas Cleaning Technoligies and described in Gallatin Steel's January 12, 2004 submittal.
   b. Perform 2 series of particulate emission measurements per shift at each of the 6 Melt Shop doors labeled ASCRAP, ASLAG, CSLAG, CSCRAP, M28 and M26 according to the sampling grid protocol approved by the Division, developed by Gas Cleaning Technoligies and described in Gallatin Steel's January 12, 2004 submittal..
   c. Data coverage of the four-day warm or cool weather testing must ≥ 90%.
   d. If, due to human error or equipment malfunction, data coverage for the four days is < 90%, the permittee shall continue to gather data for a time to be specified by the Division but no longer than 24 hours.

6. Building Control Efficiency Determination Requirements: The permittee shall determine the building control efficiency as follows:

$$e = \left(1 - \left(\frac{Z}{[Z + 127.3]}\right)\right) \cdot 100$$

   where e is the building control efficiency in % and Z is the average total emissions from both monovents and doors as determined from the above testing.

7. Failure to Meet Requirements: If after cold weather testing and warm weather testing the permittee has not demonstrated a building control efficiency ≥ 80%, the permit will be re-opened for cause and a new production rate will be determined using the mass balance and the tested building control efficiency.

8. Physical/Operational Change Requirements: Should the permittee alter the Melt Shop baghouse, ductwork or fans in any way from the original configuration, the permittee shall inform the Division and a new significant level of building control efficiency shall be determined through modeling and mass balance.

APPENDIX II – MELT SHOP MASS BALANCE: CONTINUOUS COMPLIANCE DEMONSTRATION

In order to demonstrate continuous compliance, the permittee shall perform a monthly mass balance on the Melt Shop operation. This mass balance is valid for the current Melt Shop configuration. Should the baghouse, ductwork or fans be altered in any way, the permittee shall inform the Division and a new mass balance shall be developed. The quantity e, building control efficiency, is as determined by procedures outlined in APPENDIX I – MELT SHOP PARTICULATE EMISSIONS: PRELIMINARY COMPLIANCE DEMONSTRATION. The results of the following

1. Monthly steel melt rate: $A = \frac{total\ steel\ produced}{total\ hours\ in\ month}$

2. Total Melt Shop dust: $X = 44.84\,A$

3. PCM dust: $B = 8.367\,A$

4. Roll-off dust: $C = 0.961\,A\left(\frac{e}{100}\right)$

5. Settled dust: $D = 0.0097\,A\left(\frac{e}{100}\right)$

6. Spark box dust: $E = 1.633\,A$

7. Baghouse dust: $F = 33.84\,A$

8. Baghouse emissions: $G = 0.027\,A$

9. Monovent emissions: $H = 0.873\,A\left(1-\left(\frac{e}{100}\right)\right)$

10. Door emissions: $I = 0.097\,A\left(1-\left(\frac{e}{100}\right)\right)$